

DEFENSE SYSTEMS ACQUISITION MANAGEMENT PROCESS CHART

I. INTRODUCTION

DSMC POC: Paul McIlvaine; FD-LS; (703) 805-4660

The Defense Systems Acquisition Management Process chart is a training aid for the Intermediate Systems Acquisition Course (ISAC) and is designed to serve as a roadmap of functional activities throughout the Defense Systems Acquisition Life Cycle. This Chart is based on the policies implemented by Department of Defense (DoD) 5000 Documents, dated March 15, 1996 and consists of DoD Directive (DoDD) 5000.1, *Defense Acquisition*, and DoD Regulation 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Program (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs*. A subsequent Defense Acquisition Deskbook, in CD-ROM, will describe discretionary information and best practices in implementing defense acquisition. This Chart is not a substitute for knowing these references.

Acquisition of a system is a process that begins with the identification of a need; encompasses the activities of design, test, manufacture, operations and support; may involve modifications; and ends with the disposal/recycling/demilitarization of that system. Upgrade (or modification) programs also follow the acquisition life cycle that includes the activities of design, test, manufacture, installation and checkout, and operations and support.

The primary objective of the defense acquisition system, stated in DoDD 5000.1, is to acquire quality products that satisfy the needs of the operational user with measurable improvements to mission accomplishment, in a timely manner, at a fair and reasonable price. Several important themes, promoted in the latest versions of these acquisition documents are teamwork, tailoring, empowerment, cost as an independent variable (CAIV), commercial products, and best practices. Additional goals imposed on the DoD acquisition process include, political, ethical, and economic goals.

To implement these varied themes and goals, many unique requirements, laws, and regulations are imposed on defense acquisition that still burden program managers in pursuing the efficiencies inherent in pure commercial acquisition practice.

DoD components shall first try to satisfy mission needs through nonmateriel solutions, such as changes in doctrine or tactics. If this will not provide the most cost-effective solution over the system's life cycle, the use or modification of systems or equipment that the component already owns is generally more cost-effective than acquiring new materiel. If existing U.S. military systems or other on-hand materiel cannot be economically used or modified to meet the operational requirement, an acquisition program may be justified. For additional information on the updated DoD 5000 Document changes refer to the following DSMC publications: *Introduction to Defense Acquisition, Third Edition*, June 1996; and *Joint Program Management Handbook, Second Edition*, July 1996.

This chart provides the basic information needed to understand the Acquisition Life Cycle Process. For additional information, please use the refer-

ence materials indicated above or contact the department point of contact (POC) associated with each section of the chart. Department POCs can detail further their respective section on the chart.

There is no single, approved taxonomy of the functional disciplines and subdisciplines that, taken together, constitute defense systems acquisition. Acquisition career fields have been established under the auspices of DoDD 5000.52 for both military and civilian members of the defense acquisition workforce.

Current students and government employees can obtain a single copy of this chart from the Publications Distribution Center in the basement of building 204 at the Ft. Belvoir Campus. A written request is needed for nonstudent requests. Please send requests to DSMC, ATTN ASPR, 9820 Belvoir Road, Suite G38, Ft Belvoir, VA 22060-5565 or fax to (703) 805-3726. Multiple copies requested by government personnel must be purchased through the Government Printing Office (GPO) or the Defense Technical Information Center (DTIC)/National Technical Information Service (NTIS). Nongovernment personnel must purchase one or more copies through GPO.

GPO: (202) 512-1800 Mastercard and VISA are accepted

DTIC: (703) 767-8274 or DSN 427-8274

NTIS: (703) 487-4650

II. ACQUISITION MANAGEMENT

A. Acquisition Policy & Oversight

DSMC POC: Acquisition Policy Department {FD-AP}; (703) 805-2830

The Defense Systems Acquisition Management Process is structured by DoD Regulation 5000.2-R into discrete, logical phases separated by major decision points (called milestones) to provide the basis for comprehensive management and progressive decision making. The number of phases and decision points shall be tailored to meet the specific needs of individual programs.

Milestone 0: Approval to Conduct Concept Studies

Phase 0: Concept Exploration (CE) focuses on the definition and evaluation of the feasibility of alternative concepts. Comparisons of alternative concepts normally results in identification of the most promising system concepts.

Milestone 1: Approval to Begin a New Acquisition Program

Phase I: Program Definition and Risk Reduction (PDRR) refines assessments of the alternative concepts through efforts to reduce risk so that technology, manufacturing, and support risks are well in hand.

Milestone II: Approval to enter Engineering and Manufacturing Development

Phase II: Engineering and Manufacturing Development (EMD)

translates the most promising design approach into a stable, interoperable, producible, supportable, and cost effective design; validates the manufacturing or production process; and demonstrates system capabilities through testing. **Low Rate Initial Production (LRIP)** occurs during this phase.

Milestone III: Production or Fielding/Deployment Approval

Phase III: Production, Fielding/Deployment, and Operational Support achieves an operational capability that satisfies mission needs; resolves and verifies fixes encountered during testing; and assesses potential for modifications to the fielded/deployed system. **Operational Support Activity and Modifications** occur during this phase.

Demilitarization and Disposal occurs at the end of a system's useful life. The program manager (PM) shall control demilitarization and ensure disposal is carried out in a way to minimize DoD's liability due to environmental, safety, security, and health issues.

Figure 1. Information for Milestone Reviews ACAT I and ACAT IA Programs

Information (MDA may waive non-statutory requirements)	Milestone				Reference	
	0	I	II	III	DoD 5000.2R	Other
Acquisition Program Baseline (APB)		X	X	X	Part 3.2.2	10 USC 2435
Acquisition Strategy		X	X	X	Part 3.3	
Analysis of Alternatives ¹	X	X	X ¹	X ¹	Part 2.4	
Acquisition Decision Memorandum (ADM)	X	X	X	X	Part 5.2.1	
Affordability Assessment		X	X	X	Part 2.5	
Beyond Low Rate Initial Production (LRIP) Report ²				X	Part 6.3.3	10 USC 2399
Component Cost Analysis (CCA)		X	X	X	Part 5.6	DoDD 5000.4
Cost Analysis Requirements Description (CARD)		X	X	X	Part 3.5.1	DoDD 5000.4
Cost as An Independent Variable (CAIV) Objectives		X	X	X	Part 1.5	DoDD 5000.1
Environmental, Health & Safety Evaluation ³		X	X	X	Part 3.3.6	42 USC 4321-47
Exit Criteria	X	X	X	X	Part 3.2.3	
FYDP Funding Profile (full-funding)		X	X	X	Part 2.5.1	
Independent Estimate of Life Cycle Cost		X	X	X	Part 3.5.1	10 USC 2434
Industrial Base Capability Assessment ³		X	X	X	Part 3.3.1.3	10 USC 2440
Interoperability Certification (C3I Systems)				X		DoDI 4630.8
International Cooperative Opportunities ^{2,3}		X	X	X	Part 3.3.5.2	10 USC 2350
Live Fire Test & Evaluation Waiver Certification ²			X		Part 3.4.9	10 USC 2366
Live Fire Test & Evaluation Report ²				X	Part 6.3.2	10 USC 2366
Legality of Weapons Under International Law			X	X		DoDD 5000.1
Low Rate Initial Production (LRIP) Quantities ²			X		Part 1.4.4.1	10 USC 2400
Manpower Estimate			X	X	Part 3.5.2	10 USC 2434
Mission Need Statement (MNS)	X				Part 2.3	CJCS MOP 77
Operational Requirements Document (ORD)		X	X	X	Part 2.3	CJCS MOP 77
Overarching IPT (OIPT) Leader's Assessment ⁴	X	X	X	X	Part 5.4.1	
OIPT Staff Assessments ⁴	X	X	X	X	Part 5.4.1	
Program Office Estimate (POE) (life cycle costs)		X	X	X	Part 3.5.1	DoDD 5000.4
Risk Assessment (cost, schedule & performance) ³		X	X	X	Part 3.3.2	
System Threat Assessment ²		X	X	X	Part 2.2	
Test & Evaluation Master Plan (TEMP)		X	X	X	Part 3.4.11	10 USC 2399
Test Results (DT&E, OT&E, LFT&E)			X	X	Part 6.3.1	

Notes:

¹ Milestone 0 for ACAT IA programs; Milestone I for ACAT I. May be useful if updated for MS II; unlikely to be required at Milestone III.

² Normally not applicable to ACAT IA programs.

³ Must be included in PM's acquisition strategy for ACAT I programs.

⁴ ACAT ID and ACAT IAM programs only.

The documents applicable to a particular program at a specific milestone shall be determined individually for each program through the IPT process and approved by the Milestone Decision Authority (MDA). Figure 1 contains a list of documents that may be applied.

Reduced information requirements apply to ACAT II and ACAT III Programs.

B. Program Management and Leadership

DSMC POC: Program Management Department {FD-PM}; (703) 805-4989
DSMC POC: Managerial Development Department {FD-MD}; (703) 805-4973

Fundamental change in the DoD acquisition culture is underway and requires individuals to lead change away from a hierarchical decision-making process to one where decisions are made across organizational structures by multidisciplinary teams known as Integrated Product Teams (IPT's). Successful PMs must be leaders who can create a vision for their program, translate this into concrete missions, break these down into critical success factors (goals), and nurture and develop (via empowerment and teamwork) the IPT's to successfully execute acquisition programs. Under DoDD 5000.1 and DoD Regulation 5000.2-R, the preferred management technique for use by a PM is known as Integrated Process and Product Development (IPPD), whose goals are to integrate all acquisition activities starting with requirements definition through production, fielding/deployment, and operational support in order to optimize the design, manufacturing, business, and supportability processes. IPPD is an expansion of concurrent engineering and simultaneously integrates all essential acquisition activities through the use of IPT's.

In addition to leadership, the primary program management activities are as follows:

1.) **Planning:** The first program management planning activity is the development of the acquisition strategy, which lays out how the program will accomplish its objectives in terms of, among others, cost, schedule, performance, and contracting activities. It is included as part of a single acquisition management document (SAMd) (to the maximum extent practicable). Each program's acquisition strategy is tailored to meet the specific requirements and circumstances of the program. Possible strategies include modifications of existing equipment, use of commercial/nondevelopmental item (NDI), technology demonstration and advanced prototyping, use of pre-planned product improvements (P³I), and evolutionary development.

2.) **Organizing & Staffing:** The establishment, organization, staffing, and team building of the program office should be a direct outgrowth of the task analysis which supports the program's acquisition strategy. As the program evolves, the program office organization, staffing, cooperation, empowerment, and teamwork should also evolve to support the changing task requirements and acquisition environment.

3.) **Controlling:** The control system consists of standards against which progress can be measured, a feedback mechanism that provides information to a decision maker, and a means to make corrections either to the actions underway or to the standards. Examples of standards used in the systems acquisition process include the acquisition program baseline (APB), phase exit criteria, program schedule, program budget, specifications, plans, and test criteria. Examples of feedback mechanisms for program control, oversight, and risk management include Joint Requirements Oversight Council (JROC) and Defense Acquisition Board (DAB) reviews; selected acquisition reports (SAR) and Defense Acquisition Executive Summary (DAES) reports; the cost/schedule control systems criteria (C/SCSC); Contract Funds Status Report (CFSR) charts; the configuration management (CM) process; independent life cycle cost (LCC) estimates; program and technical reviews; and developmental and operational test and evaluation (D/OT&E).

III. SYSTEMS ENGINEERING (SE)

DSMC POC: Systems Engineering Department {FD-SE}; (703) 805-5258

The function which controls the total system development effort for the purpose of achieving an optimum balance of all system elements is SE. The SE Process is designed to translate operational needs and/or requirements into a system solution that includes the design, manufacturing, T&E, and support processes and products. SE establishes a proper balance among performance, risk, cost and schedule, employing a top down iterative process of requirements analysis, functional analysis and allocation, design synthesis and verification, and system analysis and control.

A. Configuration Management (CM) Baselines -

1.) **Functional Baseline** - The technical portion of the program requirements (system performance specification) which provides the basis for contracting and controlling the system design.

2.) **Allocated Baseline** - Defines the performance requirements for each configuration item of the system (item performance specifications). Normally established at PDR (preferably by the contractor).

3.) **Product Baseline** - Established by the detailed design documentation for each configuration item (item detail specifications) and includes the process baseline and materiel baseline.

B. Preplanned Product Improvement (P³I) - A deliberate decision delaying incorporation of a system capability but providing growth allocations for the capability.

C. Technical Management Plan (TMP) - The TMP defines the contractor's plan for the conduct and management of the fully integrated effort necessary to satisfy the general and detailed requirements as implemented by the Request for Proposal (RFP) or contract schedule, statement of work/objectives, and specifications. (Best Practices)

D. Design Reviews and Audits

1.) **ASR - Alternative Systems Review** - A formal review conducted to demonstrate the preferred system concept(s).

2.) **SRR - System Requirements Review** - A formal, system-level review conducted to ensure that system requirements have been completely and properly identified and that there is a mutual understanding between the government and contractor.

3.) **SFR - System Functional Review** - A formal review of the conceptual design of the system to establish its capability to satisfy requirements. Establishes the functional baseline.

4.) **SSR - Software Specification Review** - A formal review of requirements and interface specifications for computer software configuration items.

5.) **PDR - Preliminary Design Review** - A formal review which confirms that the preliminary design logically follows the SFR findings and meets the requirements. It normally results in approval to begin detail design.

6.) **CDR - Critical Design Review** - A formal review conducted to evaluate the completeness of the design and its interfaces.

7.) **TRR - Test Readiness Review** - A formal review of the contractors' readiness to begin testing computer software configuration items.

8.) **FCA - Functional Configuration Audit** - A formal review conducted to verify that all subsystems can perform all their required design functions in accordance with their functional and allocated configuration baselines.

9.) **SVR - System Verification Review** - A formal review conducted to verify that the actual item (which represents the production configuration) complies with the performance specification.

10.) **PCA - Physical configuration Audit** - A formal review which establishes the product baseline as reflected in an early production configuration item.

11.) **PRR - Production Readiness Review** - See Manufacturing Management.

E. System/Product Definition - This is the natural result of the Requirements Generation System and the common thread (or area of common interest) among all acquisition disciplines.

1.) **Mission Need Statement (MNS)** - A formal document, expressed in broad operational terms and prepared in accordance with CJCS MOP 77, that documents deficiencies in current capabilities and opportunities to provide new capabilities.

2.) **Program Definition** - The process of translating broadly stated mission needs into a set of operational requirements from which specific performance specifications are derived.

3.) **Operational Requirements Document (ORD)** - A formatted statement, prepared by the user or user's representative, containing operational performance parameters for the proposed concept/system that defines the system capabilities needed to satisfy the mission need, and is prepared at each milestone, usually beginning Milestone I.

4.) **System Threat Assessment & Projections** - Prepared by a collaboration among the intelligence, requirements generation, and acquisition management communities to support program initiation (usually Milestone I) and maintained in a current and approved or validated status throughout the acquisition process.

IV. SOFTWARE ACQUISITION MANAGEMENT

DSMC POC: Software Management Department (FD-SM); (703) 805-3557

Major, modern DoD systems are almost always software-intensive, in which software is the largest segment in any system development cost; system development risk; system functionality; or development time criteria. DoDD 5000.1 and DoD Regulation 5000.2-R combine and integrate policy requirements and management guidance for weapons systems software, C³I systems and Automated Information Systems (AISs). An AIS is a combination of computer hardware and software, data, or telecommunications, that performs functions such as collecting, processing, transmitting, and displaying information.

Pre-Phase 0: Determining Mission Needs: DoD 5000.2-R requires confirmation that requirements defined in DoDD 8000.1 (*Defense Information Management Program*) have been met for ACAT 1A programs.

Phase 0: CE : Broad system concepts are defined. Depending on the type of software-intensive system being developed, other key Phase 0 activities typically could include:

- Assessing information warfare risks IAW DoDD TS-3600.1.
- Assessing information security (INFOSEC) requirements for AISs IAW DoDD 5200.28.
- Addressing compatibility, interoperability, and integration goals for Command, Control, Communications, Computer, and Intelligence (C⁴I) Systems IAW DoDD 4630.5, DoDI 4630.8 & CJCSI 6212.01A. Note that all systems that interface with C⁴I systems also require a C⁴I Support Plan.
- Planning for Post Deployment Software Support (PDSS). This is normally accomplished by a computer resources IPT, which prepares a Computer Resources Life Cycle Management Plan (CRLCMP).
- Refinement of ORD requirements related to software (support and integration requirements).

Phase I: PDRR: Initial software requirements are refined.

Other key Phase I activities typically could include:

- Development and refinement of the Operational Concept Document (OCD) and the system/subsystem specification (SSS).
- Establishment of the basis for the system's *Software Architecture*.
- An appropriate software development standard and acquisition strategy must be selected and *tailored*.
- Initial identification of Computer Software Configuration Items (CSCIs).

Phase II: EMD: EMD translates the most promising design into a mature, producible design. Depending on the type of software-intensive system being developed, key Phase II activities typically could include:

- Final selection and refinement of the system's *Software Architecture*. Mandatory guidance is in the Technical Architecture Framework for Information Management (TAFIM).
- Generation of a Software Development Plan (SDP) by a developer.
- Use of DoD standard data IAW DoDD 8320.1 is mandatory.
- A widely-used "Best Practice" in assessing the maturity of a developer's process is the use of the Software Capability Evaluation (SCE), an on-site risk assessment of software process maturity.
- Decision on use of the programming language Ada, mandatory for development of code for which the government is responsible for life cycle maintenance and support.
- Risk-based software metrics, based on service policies and refined from previous life cycle phases, are used to gain visibility into EMD software development activities.
- A key output of the Software Development Process is the Software Transition Plan (STrP) used to transition the software to a support environment and update the CRLCMP.
- A Software Product Specification (SPS) is normally used to establish the software product baseline.

Phase III: Production, Fielding/Deployment & Operational Support: Post Deployment Software Support (PDSS) activities, by far the largest cost component of the software life cycle, are initiated for the operational support requirement of this phase IAW with the chosen software support concept. Depending on level and scope of changes made to the software in PDSS, use of the Ada language, if not previously used, may become appropriate (specific threshold criteria and waiver procedures are specified in DoDD 3405.1)

V. TEST AND EVALUATION (T&E)

DSMC POC: Test and Evaluation Department (FD-TE); (703) 805-5282

T&E is a process by which a system or components are compared against requirements and specifications through testing. The results are evaluated to assess progress of design, performance, supportability, and the like.

Beyond Low Rate Initial Production (BLRIP) Report: Completed by the Director, Operational Test and Evaluation (DOT&E) to assess the

Initial Operational Test and Evaluation (IOT&E) for a developing system for the Milestone III decision. A copy is provided to Congress.

Combined Developmental and Operational Testing (DT/OT): Combining DT and OT is encouraged to achieve time and cost savings. The combined approach shall not compromise either DT or OT objectives. A final independent phase of IOT&E shall still be required for ACAT I and II programs for BLRIP decisions.

Developmental Test and Evaluation (DT&E): A technical test conducted to provide data on the achievability of critical system performance parameters. This testing is performed on components, subsystems, and system level configurations of hardware and software.

DT&E Report: The developing agency shall prepare a DT&E Report, and formally certify that the system is ready for the next dedicated phase of OT&E.

Follow-On OT&E (FOT&E): OT&E needed during and after the production phase to refine estimates from the IOT&E, to evaluate system changes, and to reevaluate the system as it continues to mature in the field. FOT&E may evaluate system performance against new threats or in new environments. (Best Practice)

Full-Up Live Fire T&E (LFT&E): A system level live fire test of an ACAT I or II covered system, major munitions, or missile program, or a product improvement to one of these systems configured for use in combat. Required before going BLRIP.

IOT&E: All OT&E conducted on production or production representative articles to support the decision to proceed BLRIP. It is conducted to provide a valid estimate of expected system operational effectiveness and suitability for ACAT I and II systems.

Lethality T&E: Testing the ability of a munitions to cause damage that will cause the loss or a degradation in the ability of a target system to complete its designated missions.

LFT&E Report: Completed by the DOT&E for ACAT I and II systems that have been subjected to a full-up live fire test prior to MS III. Usually included in the DOT&E report of the IOT&E when sent to Congress.

Operational Assessment: An evaluation of operational effectiveness and suitability made by an independent operational test agency, with user support as required, on other than production systems.

OT&E: The field test, under realistic combat conditions, of any item (or key component of), weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability for use in combat by typical military users, and the evaluation of the results of such test. Required for ACAT I and II programs.

Production Qualification Test: A technical test conducted to ensure the effectiveness of the manufacturing process, equipment, and procedures. These tests are conducted on a number of samples taken at random from the first production lot and are repeated if the design or process is changed significantly.

Qualification Testing: Testing that verifies the contractor's design and manufacturing process and provides a performance parameter baseline for subsequent tests. (Best Practice)

Survivability T&E: Testing the capability of a system and crew to avoid or withstand a man-made hostile environment without suffering an abortive impairment of its ability to accomplish its designated mission.

Test and Evaluation Master Plan (TEMP): The testing strategy in the TEMP for ACAT I and IA programs shall focus on the overall structure, major elements, and objectives of the test and evaluation program that is consistent with the acquisition strategy.

Vulnerability T&E: Testing a system or component to determine if it suffers definite degradation as a result of having been subjected to a certain level of effects in an unnatural hostile environment. A subset of survivability.

VI. MANUFACTURING MANAGEMENT

DSMC POC: Manufacturing Management Department {FD-MM}; (703) 805-3763

Manufacturing (also referred to as Production) is the conversion of raw materials into products and/or components through a series of manufacturing procedures and processes. Manufacturing Management is the technique of planning, organizing, directing, controlling, and integrating the use of people, money, materials, equipment, and facilities to accomplish the manufacturing task economically.

Assess and Resolve Production Risk: Identify and demonstrate required advances beyond the current capability.

Assess Production Risks: Estimate probabilities of success or failure in manufacturing.

Complete Manufacturing Technology Development: Manufacturing technology is developed through a phased approach from definition to demonstration. This represents the final demonstration of the integrated manufacturing scheme.

Establish Design to Goals: Establish design parameters for the system.

Estimate Manufacturing Costs: Develop resource estimates for manufacturing of various system alternatives.

Evaluate Manufacturing Technology (MAGNETITE) Needs: Discriminate manufacturing capabilities versus requirements to define new facilities and equipment needs.

Evaluate Production Feasibility: Assess the likelihood that a system design concept can be produced using existing manufacturing technology.

Final Manufacturing Plan: The refined and formalized initial manufacturing plan.

Industrial Base Issues: Critical resources, skills, and long lead materials and processes which are required by the system design such as vendor/supplier selection, subcontractor selection/make versus buy, foreign strategic material dependencies, foreign component technology dependencies, and manpower skills and availability.

Influence the Design Process (Through Producibility Engineering and Planning): Application of design and analysis techniques to reduce the potential manufacturing burden.

LRIP: Low rate of output used to prove manufacturing technology and facilities at the beginning of production.

Preliminary Manufacturing Plan: The description of a method for employing the facilities, tooling and personnel resources to produce the design. The Manufacturing Plan belongs to the PM and is used to manage program execution throughout the life cycle of the program. This plan is not required in support of milestone decisions and shall not be used as milestone documentation or as periodic reports.

Producibility Assessments: Assessments of the producibility aspects of proposed design alternatives/approaches.

Production Readiness Review (PRR): Formal examination of a program to determine if the design of the product and the manufacturing process are ready for the production phase. Performed during EMD.

Production Strategy: The approach to obtaining the total quantity of a system at some rate for some cost.

Second Source/Breakout Decisions: Execution of acquisition strategy to establish two producers for the part or system and/or strategy to convert some parts or systems from contractor furnished to government furnished.

Spare Parts Production: Arrange for purchase of spare parts or a portion of normal production runs.

Value engineering (VE): A program to allow for the sharing of cost savings derived from improvements in the manufacturing processes.

VII. ACQUISITION LOGISTICS

DSMC POC: Logistics Support Department {FD-LS}; (703) 805-4652

Acquisition Logistics is the process of systematically identifying and assessing logistics alternatives, analyzing and resolving logistics deficiencies, and managing logistic support throughout the acquisition process.

Support Elements, such as the following, have traditionally been included under Acquisition Logistics:

- 1.) Maintenance Planning
- 2.) Manpower and Personnel
- 3.) Supply Support
- 4.) Support Equipment
- 5.) Technical Data
- 6.) Training and Training Support
- 7.) Computer Resources Support
- 8.) Facilities
- 9.) Packaging, Handling, Storage & Transportation
- 10.) System Interface

Support Plan (SP) (Also known as Integrated Logistics Support Plan (ILSP) or Acquisition Logistics Support Plan (ALSP)) - Best practice in logistics generally involves preparing and maintaining a formal or informal document for support of the fielded system. The SP belongs to the PM and is used to manage program execution throughout the life cycle of the program. This plan is not required in support of milestone decisions and shall not be used as milestone documentation or as periodic reports. It may be prepared as a standalone document or as an annex to other documents such as the TMP.

Deployment Plan - The plan to provide for a smooth introduction of the system/equipment to the user. This plan is not required in support of milestone decisions and shall not be used as milestone documentation or as periodic reports.

Post Production Support Plan (PPSP) - A plan to ensure continued systems management and support activities to ensure continued attainment of system readiness objectives with economical logistic support after cessation of production of the end-item (system or equipment). This plan is not required in support of milestone decisions and shall not be used as milestone documentation or as periodic reports.

Supportability Analysis - An analytical tool, conducted as part of the SE process, to determine how to most cost-effectively support the system over its entire life cycle and form the basis for related design requirements included in the specifications.

VIII. BUSINESS, COST ESTIMATING, AND FINANCIAL MANAGEMENT

Business, cost estimating, and financial management is the process of systematically performing financial planning, formulating financial pro-

grams and administering budgets, accounting for obligations and expenditure of funds, cost performance measurement of contractors, cost estimating, and advising or assisting commanders, PMs and other officials in discharging all aspects of their responsibilities for financial management, in direct support of the Defense Acquisition process.

A. Funds Management

DSMC POC: Funds Management Department {FD-FM}; (703) 805-3755

Government Budget Plan: The generic title for an internal government document that plans the long range budgeting strategy for the life of a given program.

Planning, Programming and Budgeting System (PPBS): The primary resource allocation biennial process within DoD to request funding for all operations including weapon system development and acquisition. It is essential to convert each program's event driven acquisition strategy and phasing into the PPBS's calendar driven funding profiles to assure the appropriate amount and type of funds are available to execute the desired program.

Planning phase - The Defense Planning Guidance (DPG) sets forth broad policy objectives and military strategy. The DPG is published in the winter of the odd calendar years and guides the development of the Program Objectives Memorandum (POM).

Programming phase - The POM and the Program Decision Memorandum (PDM) are the keystone documents completed in this phase. The POM, submitted in April of even years, provides the services' strategies to meet the DoD objectives outlined in the DPG. The POM is reviewed by staff officers of the Secretary of Defense, the Commanders in Chief of unified and specified commands, and the Joint Chiefs of Staff. The reviews highlight major program issues and alternatives. The Deputy Secretary of Defense reviews the POM and the issues and decides on the appropriate course of action. The decisions are documented in the PDM.

Budgeting phase - Completion of the Budget Estimate Submission (BES). The BES is the POM documentation updated for the decisions outlined in the PDM. The BES is reviewed by the OSD Comptroller and the Office of Management and Budget (OMB) for execution feasibility. Funding changes due to execution issues are identified in Program Budget Decisions (PBDs). The updated BES is forwarded to OMB and incorporated into the President's Budget. The President's Budget is due to Congress no later than the first Monday in February.

Enactment - The process that Congress uses to develop and pass the Authorization and Appropriation Bills. In the enactment process, the DoD has an opportunity to work with Congress and defend the President's budget.

Types of Funds:

6.1 Basic Research: Includes all scientific study and experimentation efforts directed toward increasing knowledge and understanding in those

fields of the physical, engineering, environmental and life sciences related to long-term national security needs.

6.2 Applied Research: Includes all military applicability study and experimentation efforts directed toward nonspecific weapon systems.

6.3a Advanced Technology Development: Includes all efforts directed toward projects that have moved into the development of hardware for test. The prime result for these efforts is proof of design concept.

6.3b Demonstration and Validation: Includes all efforts of projects in the PDRR acquisition phase.

6.4 Engineering Manufacturing Development (EMD): Includes all development efforts in the EMD acquisition phase.

6.5 Management and Support: Includes support of organizations, people and facilities required for general research and development activities not funded under Defense Business Operating Funds concept. Included are test ranges, maintenance and support of laboratories, operations and maintenance of test aircraft and ships, and study and analyses in support of Research and Development programs

B. Cost/Schedule Management

DSMC POC: Cost/Schedule Management Department (FD-CS); (703) 805-3705

Cost Estimating: A realistic appraisal of the level of cost most likely to be realized. The main estimation methods are analogy, parametric, engineering, and extrapolation from actuals.

Cost Performance Report (CPR): An objective summary of contract status that includes the following:

Actual Cost of Work Performed (ACWP) - Cost of work completed

Budgeted Cost of Work Scheduled (BCWS) - Value of work scheduled in budget terms

Budgeted Cost of Work Performed (BCWP) - Value of work completed in budget terms

Earned Value Management Systems (EVMS) Cost/Schedule Control Systems Criteria (C/SCSC): Formal, detailed management standards (for significant dollar threshold contracts in excess of \$70 Million RDT&E or \$300 Million Procurement) to provide for contractor performance measurement. Note: On less significant contracts, C/SSR is normally required.

Cost/Schedule Status Report (C/SSR): Reasonably objective summary of contract status in terms of BCWS, BCWP, and ACWP.

Earned Value Management: A DoD management concept to provide integrated Contractor cost/schedule/technical performance information to the government.

Life Cycle Cost (LCC): The total cost to the government of acquisition and ownership of the system over its full life. It includes the cost of development, acquisition, support, and (where applicable) disposal.

Work Breakdown Structure: A product oriented family tree composed of hardware, software, services, and data which comprise the entire work effort under a program.

IX. CONTRACT MANAGEMENT

DSMC POC: Contract Management Department (FD-CM); (703) 805-4470

Contract Management is the process of systematically planning, organizing, executing, and controlling the mutually binding legal relationship obligating the seller to furnish supplies and/or services and the buyer to pay for them.

Contract: The document that definitizes the government/industry agreement.

A **Draft RFP** and **Presolicitation Conference** are used to ensure the requirements are understood by industry and that feedback is provided to the government.

Cost Type Contract: A family of cost-reimbursement type contracts where the government pays the cost, subject to specified limitations. This type may provide for payment of a fee that may consist of an award fee, incentive fee, or fixed fee.

Engineering Change Proposal (ECP): A formal document used to make engineering changes to configuration management baselines in an existing contract

Firm Fixed Price Contract: A family of fixed-price type contracts where the government pays a price, subject to specified provisions. This type may provide for payment of incentives or other sharing arrangements.

RFP, SOW/SOO, SPEC, CDRL (Request for Proposal, Statement of Work/Statement of Objectives, Specification, Contract Data Requirements List): The documents used in letting contracts for each phase of work. The RFP sets forth the needs, the SOW/SOO is the formal statement of these needs as requirements for contractual effort (what the contractor will do), the specification sets forth the technical requirements (what the system will do), and the CDRL definitizes the data deliverables.